

1. A sun visor assembly for a vehicle to be used in conjunction with an overhead airbag, comprising:

a visor panel;

a rod member that is attached to the visor panel;

a first mount for interconnecting the rod member and the vehicle wherein the rod member is pivotably connected to the first mount so the visor panel can be disposed in a first deployed position and a retained position; and

a deflecting element for allowing the visor panel to be deflected out of a trajectory of the overhead airbag upon activation without fragmenting the visor panel or separating the sun visor assembly from the vehicle.

2. The sun visor assembly of claim 1, wherein the retained position of the visor panel is proximate an overhead airbag module such that the visor panel is substantially parallel to a plane containing a roof of the vehicle.

3. The sun visor assembly of claim 2, wherein the first deployed position of the visor panel covers an upper portion of a side of a windshield of the vehicle.

4. The sun visor assembly of claim 3, wherein the visor panel can be disposed in a second deployed position that covers an upper portion of a side window of the vehicle.

5. The sun visor assembly of claim 4, further comprising a second mount for interconnecting the sun visor assembly and the vehicle, wherein the second mount is located on an inboard side of the vehicle and the first mount is located on an outboard side of the vehicle.

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6. The sun visor assembly of claim 5, wherein the visor panel is capable of becoming detached from the second mount so the visor panel can be disposed in the second deployed position.

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7. The sun visor assembly of claim 6, wherein the first and second mounts are fastened to a header of the vehicle.

8. The sun visor assembly of claim 1, wherein the visor panel has an outboard and inboard edge, and a top and bottom edge;

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the rod member having a first portion that extends adjacent to and is rotatably connected to the bottom edge of the visor panel;

the rod member further has a second portion that extends adjacent to and is detachably connected to the outboard edge of the visor panel; and

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the visor panel detaches from the second portion of the rod member and rotates along an axis collinear with the first portion of the rod member out of the path of the overhead airbag when a force is applied against the visor panel upon activation of the overhead airbag.

9. The sun visor assembly of claim 1, wherein the visor panel has a top and bottom edge;

the rod member is rotatably connected along the top edge of the visor panel creating an axis of rotation collinear with the rod member;

5 the visor panel is held in the retained position by a locking mechanism such that the visor panel can be released from the locking mechanism by a vehicle passenger, whereupon the visor panel moves from the retained position to the first deployed position; and

10 the deflecting element allows the visor panel to be temporarily deformed when a force is applied against the visor panel upon activation of the overhead airbag such that the visor panel is released from the locking mechanism and moves out of the retained position away from the trajectory of the overhead airbag.

10. The sun visor assembly of claim 1, wherein the visor panel has a top and bottom edge, the top edge being adjacent the first mount;

15 the rod member has a portion that extends along a length parallel to, but not proximate the top edge of the visor panel such that the rod member does not impede the trajectory of the overhead airbag upon activation; and

20 the visor panel is capable of being deformed out of the trajectory of the overhead airbag upon activation.

11. A sun visor assembly for a vehicle to be used in conjunction with an overhead airbag, comprising:

a visor panel having an outboard and inboard edge, and a top and bottom edge;

5 a rod member having a first portion that extends adjacent and is rotatably connected to the bottom edge of the visor panel, and a second portion that extends adjacent and is detachably connected to the outboard edge of the visor panel;

10 a mount interconnecting the rod member and the vehicle such that the rod member is pivotably connected to the mount so the visor panel can be disposed in a first deployed position and a retained position; and

15 wherein the visor panel is capable of detaching from the second portion of the rod member and rotating along an axis collinear with the first portion of the rod member out of a trajectory of the overhead airbag when a force is applied against the visor panel upon activation of the overhead airbag.

12. The sun visor assembly of claim 11, wherein the outboard edge of the visor panel is detachably connected to the second portion of the rod member by a catch mechanism.

20 13. The sun visor assembly of claim 12, wherein the catch mechanism is a ball and spring detent.

14. The sun visor assembly of claim 12, wherein the catch mechanism is a frangible pin.

15. The sun visor assembly of claim 12, wherein the catch mechanism is a detachable strap interconnecting the visor panel and the second portion of the rod member.

16. The sun visor assembly of claim 12, wherein the catch mechanism is located proximate the top edge of the visor panel.

17. The sun visor assembly of claim 16, wherein the first portion of the rod member is substantially perpendicular to the second portion of the rod member.

18. The sun visor assembly of claim 17, wherein the retained position of the visor panel is proximate an overhead airbag module and the visor panel is substantially parallel to a plane containing a roof of the vehicle.

19. The sun visor assembly of claim 18, wherein the first deployed position of the visor panel covers an upper portion of a side of a windshield of the vehicle.

20. The sun visor assembly of claim 19, wherein the visor panel can be disposed in a second deployed position that covers an upper portion of a side window of the vehicle.

21. A sun visor assembly for a vehicle to be used in conjunction with an overhead airbag, comprising:

a visor panel with a top and bottom edge;

5 a rod member rotatably connected to the top edge of the visor panel creating an axis of rotation collinear with the rod member, such that the visor panel can be disposed in a first deployed position and a retained position;

a first mount for interconnecting the rod member and the vehicle, such that the rod member is pivotably connected to the first mount;

10 a locking mechanism which can maintain the visor panel in the retained position until a vehicle passenger releases the visor panel from the locking mechanism, whereupon the visor panel moves from the retained position to the first deployed position; and

15 a deflecting element for allowing the visor panel to be temporarily deformed and released from the locking mechanism when a force is applied against the visor panel upon activation of the overhead airbag, such that the visor panel moves out of the retained position away from a trajectory of the overhead airbag.

22. The sun visor assembly of claim 21, wherein the locking mechanism engages the bottom edge of the visor panel.

20 23. The sun visor assembly of claim 21, wherein the locking mechanism has a release lever to allow the vehicle passenger to release the visor panel from the retained position to the first deployed position.

24. The sun visor assembly of claim 21, wherein the visor panel contains a spring loaded pivot disposed between the top and bottom edge of the visor panel such that the visor panel temporarily bends and becomes disengaged from the locking mechanism when the force of the activated overhead airbag is applied.

25. The sun visor assembly of claim 21, wherein the visor panel contains a crease disposed between and parallel to the top and bottom edge of the visor panel such that the visor panel bends and becomes disengaged from the locking mechanism when the force of the activated overhead airbag is applied.

26. The sun visor assembly of claim 21, wherein the visor panel is capable of being disposed in a plurality of deployed positions, including the first deployed position, which covers an upper portion of a side of a windshield of the vehicle, each deployed position defining a different angle between the visor panel and a vehicle roof.

27. The sun visor assembly of claim 26, wherein the visor panel is retained in one of the plurality of deployed positions by a detent mechanism.

28. The sun visor assembly of claim 27, wherein the detent mechanism comprises a spring and ball.

29. The sun visor assembly of claim 27, wherein the visor panel automatically moves from the retained position to the first deployed position when released from the locking mechanism, and the visor panel is manually engaged into the plurality of deployed positions by the vehicle passenger.

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30. The sun visor assembly of claim 21, further comprising a second mount for interconnecting the sun visor assembly and the vehicle, wherein the second mount is located on an inboard side of the vehicle and the first mount is located on an outboard side of the vehicle.

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31. The sun visor assembly of claim 30, wherein the visor panel is capable of becoming detached from the second mount so the visor panel can be disposed in a position covering an upper portion of a side window of the vehicle.

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32. The sun visor assembly of claim 30, wherein the first and second mounts are fastened to a header of the vehicle.

33. A sun visor assembly for a vehicle to be used in conjunction with an overhead airbag, comprising:

a visor panel capable of being temporarily bent between a top and bottom edge;

5 a rod member rotatably connected to the top edge of the visor panel creating an axis of rotation collinear with the rod member such that the visor panel can be disposed in a retained position and a first deployed position;

10 a first mount located on an outboard side of the vehicle and a second mount located on an inboard side of the vehicle, such that the first and second mounts can interconnect the rod member and the vehicle; the visor panel is capable of becoming detached from the second mount so the visor panel can be disposed in a position covering an upper portion of a side window of the vehicle;

15 a locking mechanism that engages the bottom edge of the visor panel to maintain the visor panel in the retained position, the locking mechanism further comprising a release lever to allow a vehicle passenger to release the visor panel from the retained position to the first deployed position; and

20 wherein the visor panel is capable of bending to disengage the visor panel from the locking mechanism when a force is applied against the visor panel upon activation of the overhead airbag, such that the visor panel moves out of the retained position away from a trajectory of the overhead airbag.

34. A sun visor assembly for a vehicle to be used in conjunction with an overhead airbag, comprising:

a visor panel having a top and bottom edge and a deflecting portion allowing the visor panel to be deformed out of a trajectory of the overhead airbag upon activation;

a rod member attached to the visor panel, the rod member having a portion that extends along a length parallel to, but not proximate the top edge of the visor panel, such that the rod member does not impede the trajectory of the overhead airbag upon activation; and

a first mount adjacent the top edge of the visor panel, the mount interconnecting the rod member and the vehicle, wherein the rod member is pivotably connected to the first mount so the visor panel can be disposed in a first deployed position and a retained position.

35. The sun visor assembly of claim 34, wherein the deflecting portion of the visor panel is flexible fabric that can be deformed out of the trajectory of the overhead airbag upon activation.

36. The sun visor assembly of claim 34, wherein the deflecting portion of the visor panel is a tear seam to allow the visor panel to deform out of the trajectory of the overhead airbag without fragmenting.

37. The sun visor assembly of claim 35, wherein the deflecting portion of the visor panel deforms to form a channel for guiding a deployment of the overhead airbag upon activation into a proper deployment position.

5 38. The sun visor assembly of claim 34, further comprising a second mount for interconnecting the sun visor assembly and the vehicle, wherein the second mount is located on an inboard side of the vehicle and the first mount is located on an outboard side of the vehicle.

10 39. The sun visor assembly of claim 38, wherein the visor panel is capable of becoming detached from the second mount.

15 40. The sun visor assembly of claim 38, wherein the visor panel has an outboard and inboard edge, and the rod member extends from the first mount alongside the outboard edge toward the bottom edge of the visor panel; the rod member then extending from the outboard edge toward the inboard edge, alongside the bottom edge of the visor panel.

20 41. The sun visor assembly of claim 40, wherein the rod member further extends from the bottom edge toward the top edge, alongside the inboard edge of the visor panel, the rod member connecting to the second mount, and forming a U-shape throughout the visor panel.

42. The sun visor assembly of claim 40, wherein the deflecting portion of the visor panel is located proximate the top edge of the visor panel.

43. The sun visor assembly of claim 34, wherein the visor panel has an outboard and inboard edge, and the rod member extends from the first mount to the outboard edge of the visor panel midway between the top and bottom edge; the rod member then extending from the outboard edge toward the inboard edge, substantially equidistant from the top and bottom edge of the visor panel.

44. The sun visor assembly of claim 43, wherein the visor panel is rotatably connected to the rod member with an axis of rotation collinear with the rod member, such that the visor panel is rotatable out of the trajectory of the overhead airbag upon activation.

45. The sun visor assembly of claim 44, further comprising a second mount for interconnecting the rod member and the vehicle, wherein the second mount is located on an inboard side of the vehicle.

46. The sun visor assembly of claim 45, wherein the rod member is capable of becoming detached from the second mount.

47. A sun visor assembly for a vehicle to be used in conjunction with an overhead airbag, comprising:

a visor panel;

means for supporting the visor panel in a retained position and a first
5 deployed position;

a first mount for attaching the sun visor assembly adjacent a roof of the vehicle, wherein the supporting means is pivotably connected to the first mount so the visor panel can be disposed in the retained position and the first deployed position; and

means for allowing the visor panel to be deflected out of a trajectory of the
10 overhead airbag upon activation without fragmenting the visor panel or separating the sun visor assembly from the vehicle.

48. The sun visor assembly of claim 47, wherein the first deployed position of the visor panel covers an upper portion of a side of a windshield of the vehicle.

49. The sun visor assembly of claim 48, wherein the visor panel can be
15 disposed in a second deployed position that covers an upper portion of a side window of the vehicle.

20 50. The sun visor assembly of claim 49, further comprising a second mount for attaching the sun visor assembly adjacent a roof of the vehicle, wherein the second mount is located on an inboard side of the vehicle and the first mount is located on an outboard side of the vehicle.

51. The sun visor assembly of claim 50, wherein the visor panel is capable of becoming detached from the second mount so the visor panel can be disposed in the second deployed position.

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52. The sun visor assembly of claim 51, wherein the first and second mount are fastened to a header of the vehicle.